ERYING
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M-ATX GAMING MOTHERBOARD
OPERATING GUIDE

ERYING M-ATX
Gaming Motherboard

User Manual

www.erying.cc
Version 1.0

Contents

Introduction of Interface

According to the standards of SJ/T11364-2006 in Measures for the Control of Pollution from Electronic Information Products issued by the Ministry of Information Industry of People's Republic of China, here is the description of identifications of the control of pollution, toxic/harmful substances, or elements about the product:

Identifications of toxic/harmful substances or elements in the product:

Name and content of toxic/harmful substances or elements in the product

Components	Toxic/harmful substances or elements					
	Pumbum (pb)	Hydragyrum (pb)	Cadmium (CD)	Hexavalent chrominm (cr(vl))	Poly brominated biphenyl (PBB)	Polybrominated Diphenyl Ethers (PBDE)
PCB board	X	0	0	0	0	0
Stuctural components	0	0	0	0	0	0
Chips	0	0	0	0	0	0
Connection devices	0	0	0	0	0	0
Passive components	0	0	0	0	0	0
Welding metal	0	0	0	0	0	0
Wirse	X	0	0	0	0	0
Soldering flux, labels of thermal paste and other materials	0	0	0	0	0	0

0: means the content of the toxic/harmful substance in all homogeneous materials of the component is within the content limit of SJ/T11364-2006.
X: means at least the content of the toxic/harmful substance in one Homogeneous material of the component exceeds the content limit of SJ/T11364-2006.
Note: the content of pumbum corresponding to X exceeds the content limit of SJ/T11364-2006, but it is in compliance with the exempted items of EU ROHS.

1 Introduction

Thanks for purchasing Erying motherboard which provides excellent performance and quality assurance.

Package Contents:

- ☐ 1* Erying M-ATX Gaming Motherboard
- ☐ 2*SATA Cable
- ☐ 1*User's Manual
- ☐ 1*I/O Panel shield

> Caution:The above package content is for reference only,subject to change without prior notice,please refer to the actual. Erying company reserves the finally explanatory rights.

2 Motherboard Features

Erying M-ATX Gaming Motherboard based on Intel HM570/Z590 chipset, support DDR4-2133/2400/2666/3200(OC)(1.35V) Mhz memory.

The motherboard support 1*PCI Express 4.0 x16 slot and 1*PCI Express 3.0X1 slot,2*DDR4 memory slots,4*SATA3.0 ports,2*M.2 SSD slots,1*WIFI slot.

It'sa cost-effective motherboard with good extensibility and strong extension performance.

Motherboard Specifications

- ☐ Form factor:
  - → M-ATX
- ☐ Chipset:
  - → Intel HM570 / Z590 Chipset
- ☐ CPU:
  - → Intel 11th Core I5/I7/I9 CPU (Tigert Lake-H H45)
- ☐ Memory:
  - → Support DDR4-2133 / 2400 / 2666 / 3200(OC) (1.35V) Mhz memory
  - → Offer 2DIMM slots
  - → Support Extreme Memory Profile（XMP.1 & XMP.2）

- ☐ **Slots:**
  - 1*PCI Express 4.0 x16 slot
  - 1*PCI Express 3.0 x1 slot
  - 2*M.2 SSD slots
- ☐ **Storage:**
  - 4*SATA 3.0 ports
- ☐ **5-CH audio devices:**
  - 1*Onboard 7-channel audio chipset
- ☐ **Network Function:**
  - Realtek 1000M Wired LAN
- ☐ **Front USB ports:**
  - 2*USB 2.0 header support 2*USB 2.0 ports
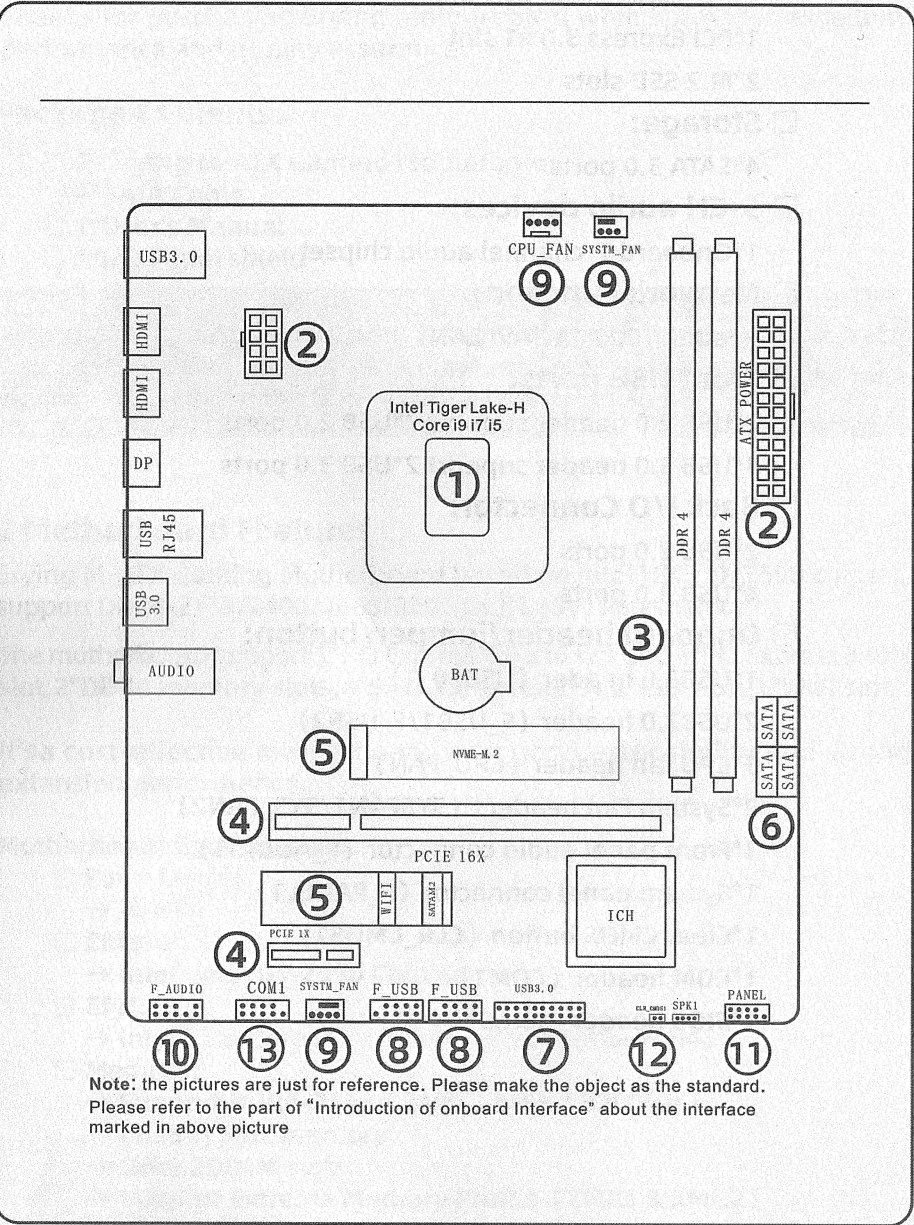 - 1*USB 3.0 header support 2*USB 3.0 ports
- ☐ **Back I/O Connector:**
  - 2*USB 2.0 ports
  - 4*USB 3.0 ports
- ☐ **Onboard header/jumper/button:**
  - 1*USB3.0 header（USB30_1）
  - 2*USB2.0 header（F_USB1/F_USB2）
  - 1*CPU fan header（CPU_FAN）
  - 2*System Fan headers（SYSFAN1/SYS_FAN2）
  - 1*Front panel audio connector（F_AUDIO1）
  - 1*System panel connector（F_PANEL1）
  - 1*Clear CMOS button（CLR_CMOS1）
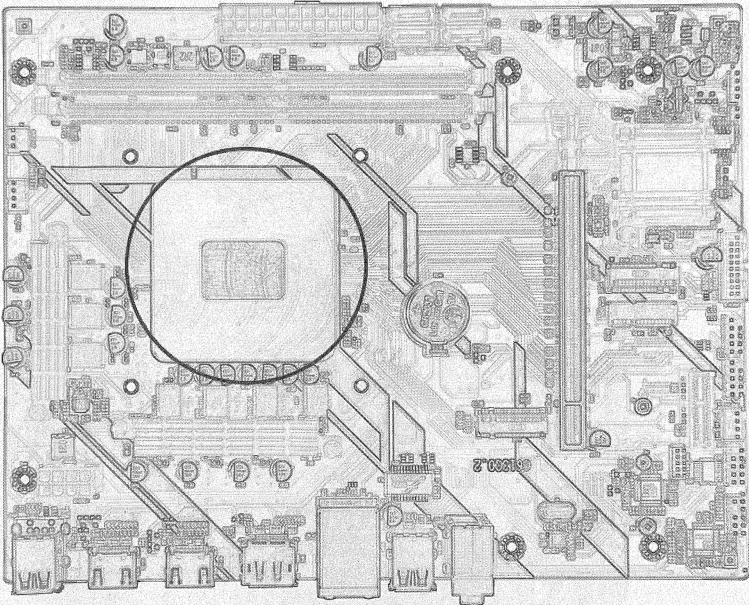 - 1*COM header（COM1）
  - 1*BIOS header（JBIOS1）

3 Motherboard layout introduction:

Note: the pictures are just for reference. Please make the object as the standard. Please refer to the part of "Introduction of onboard Interface" about the interface marked in above picture

Introduction to mainboard layout	
1 CPU	2 Power Interface
3 DIMM 2 slots	4 PCI Express slots
5 M.2 SSD slots	6 SATA3.0 ports
7 USB 3.0 header	8 USB 2.0 headers
9 Fan Symtem fan headers	10 Front audio interface
11 System panel interface	12 Clear CMOS header
13 COM1 header	

3-1 Connecting header

1 CPU base

This motherboard has a socket base designed for the Intel BGA1787 11th Generation Core Processor with onboarded in it.

3-2 ATX power interface

These interface are for an ATX power supply. The plugs from the power supply are designed to fit these interface in only one orientation. Find the proper orientation and push down firmly until the interface completely fit.
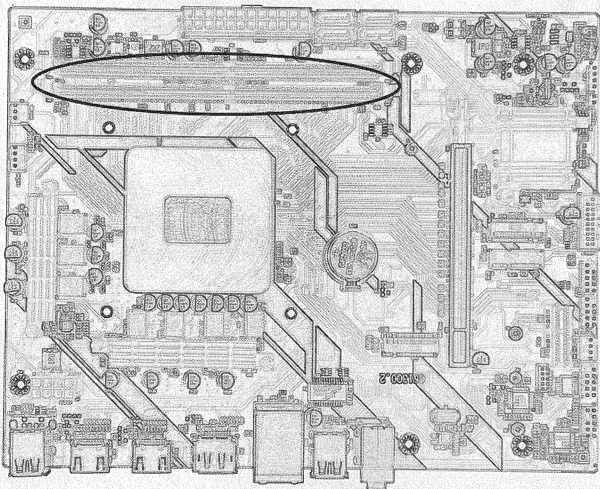

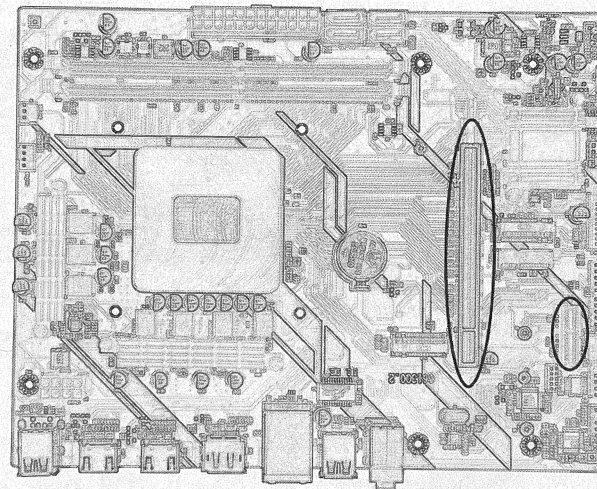## 3-3 DDR4 slots

The mainboard provides two DDR4 memory slots.
* Support DDR4-2133/2400/2666/3200(OC)(1.35V) Mhz memory
* Offer 2 DIMM slots
* Support Extreme Memory Profile(XMP. 1&XMP.2)

Warm prompt: memory overclocking frequency also depends on the match itself overclocking CPU and memory performance.
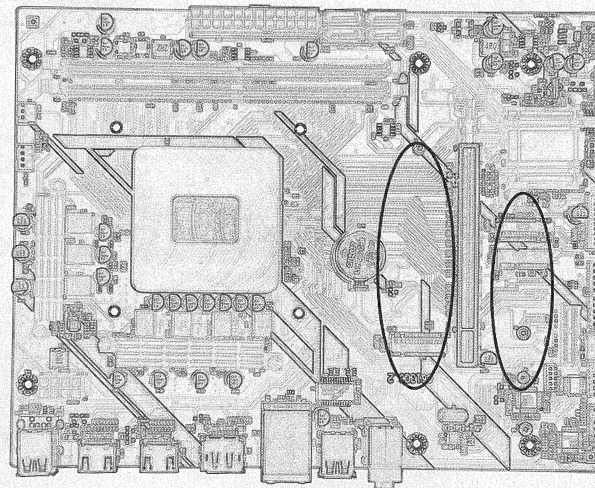

3-4 PCI Express slots

Motherboard support 1* PCI Express 4.0 x16 slot,1* PCI Express 3.0 x1 slot for a graphics or video card.

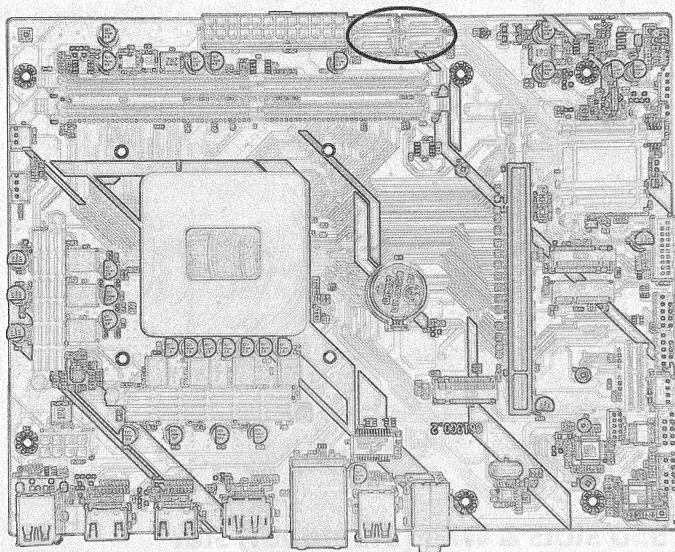## 3-5 M.2 SSD slots & WIFI (Bluetooth) slot

The motherboard has two M.2 SSD slots. Please install M.2 SSD & WIFI card correctly in the slot following the following steps:
1. please use a screwdriver to remove the screws and studs in order, and then lock the stud first when the actual M.2 SSD & WIFI card is found to be suitable for the screw hole position.
2. insert the M.2 SSD & WIFI card into the slot in a inclined angle.
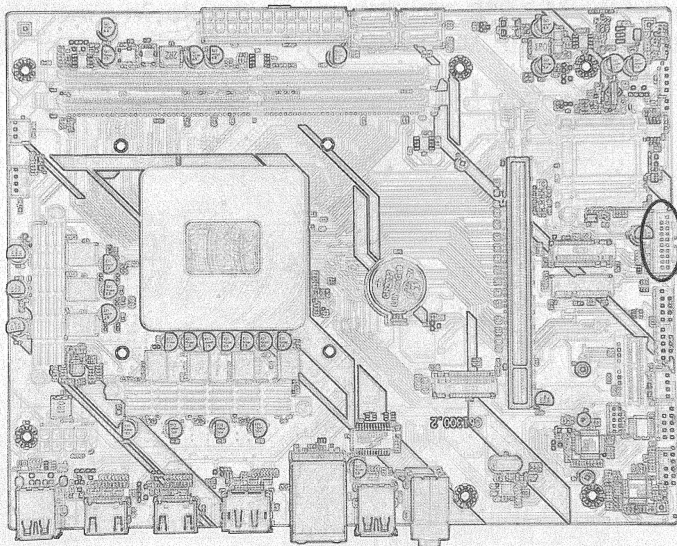3. press M.2 SSD & WIFI card, then lock the screw.

3-6 Serial ATA3.0 Interface

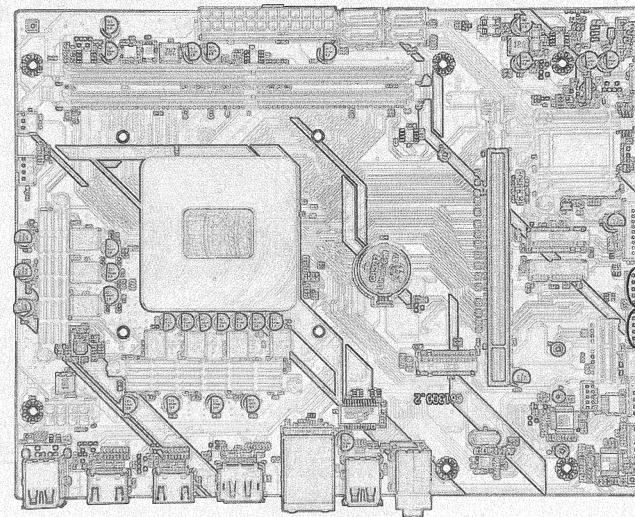These connectors connect to Serial ATA 3.0 hard disk drives and optical drives via Serial ATA 3.0 6Gb/s signal cables.

3-7 USB 3.0 Interface

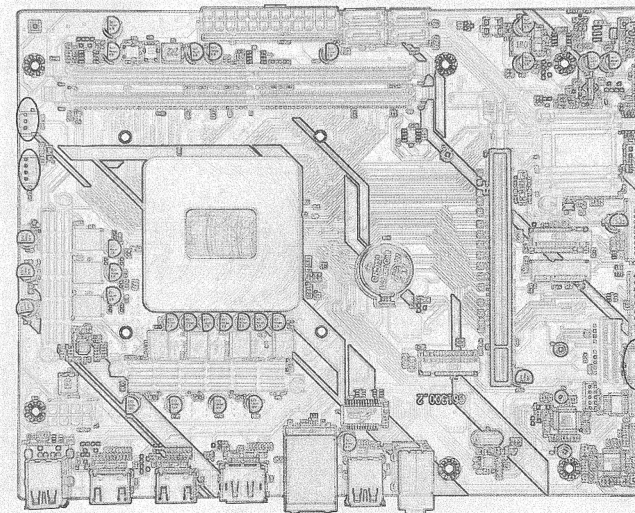This connector is for USB 3.0 devices can be downwards compatible with USB 2.0/1.1 devices.

3-8 USB 2.0 Interface

These connectors are for USB 2.0 parts. Connect the USB module cable to any of these connectors,then install the module to a slot opening at the back of the system chassis. These USB connectors comply with the USB 2.0 specification that supports up to 480Mbps connection speed.
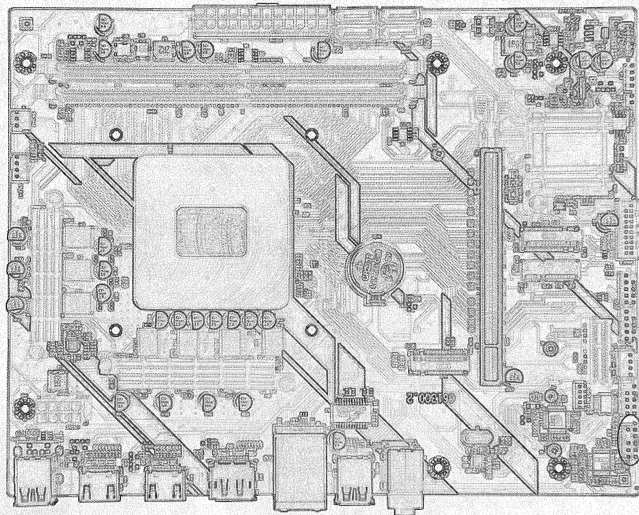
3-9 FAN header/System header

Connect the fan cables to the fan connectors on the motherboard for CPU cooling&PC case cooling. Making sure that the black wire of each cable matches the ground pin of the connector.
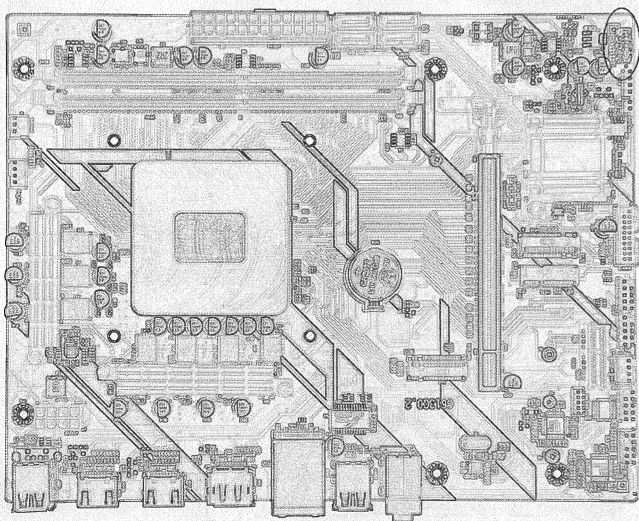
3-10 Front panel audio Interface :

This connector is for a chassis-mounted front panel audio I/O module that supports either High Definition Audio or AC' 97 audio standard. Connect one end of the front panel audio I/O module cable to this connector.
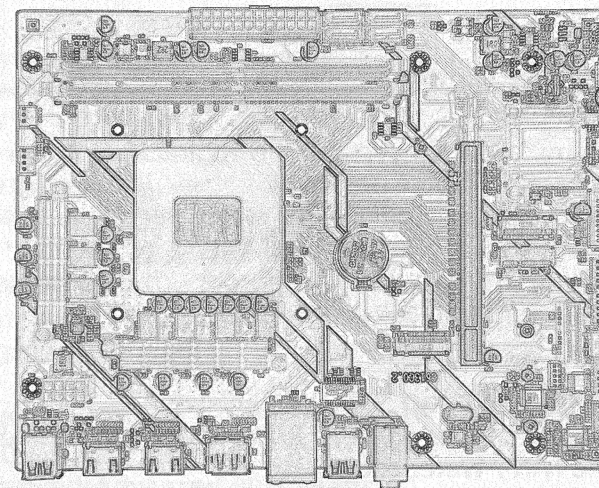
3-11 System panel Interface

This 2-pin connector is for the system power LED. Connect the chassis power LED cable to this connector. The system power LED lights up when you turn on the system power.
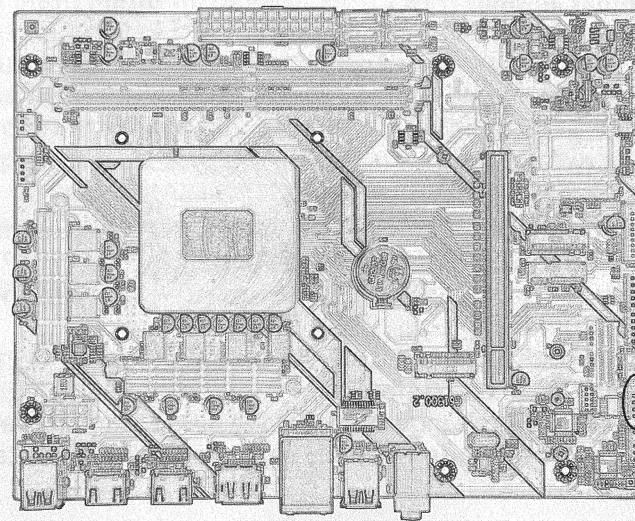
3-12 Clear CMOS header

There is a CMOS RAM on board that has a power supply from external battery TO keep the system configuration data. With the CMOS RAM,the system can automatically boot oS every time it is turned on. If you want to clear the system configuration, use the CLR_CMOS Button to clear data.
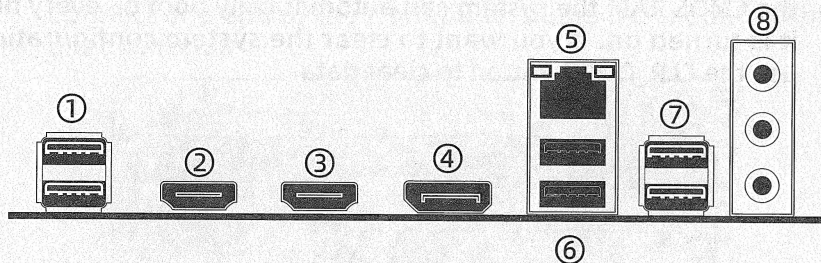
3-13 COM1 header

Used for communication and debugging with other devices.

4 Back Panel I/O Connector:

① USB 3.0 Port*2   ②③ HDMI Port*2   ④ DP Port*1
⑤ LAN Jack*1   ⑥ USB   2.0 port*2   ⑦ USB 3.0 Port*2
⑧ 5.1 Channel HD Auido Port*1

5 Hardware Installation

Please follow the following steps to complete the installation:
Installing the FAN / Water cooler
Installing the memory & SSD
Loding PC case
Installing all expansion card

Caution: if you install high power hardware equipment, please use high power supply.

6 BIOS Setting

BlOS Setup Program Function Keys
☐ <↑←↓→>Move the selection bar to select a setup menu
☐ <Enter>Execute command or enter a menu
☐ <Esc>ain Menu:Exit the BlOS Setup program Submenus:Exit current submenu
☐ <F8>Capture the current screen as an image
☐ <F9>Load Optimized Defaults
☐ <F10>Save all the changes and exit the BIOS Setup program
☐ <F11>Advanced mode The BlOS settings can be operated with the mouse.

Erying M-ATX Gaming Motherboard Driver Installation

The driver can be automatically install when installing the WIN 10 or WIN11 system,after then the sound card model,on-board video card model or on-board network card model can be used by the main board. In the future, we will provide a link to download the drivers on our official website. Please visit https://erying.cc to download the required drivers .

1.Win10 automatic update.
2.Win10 app store obtains Realtek audio control for free,download the website:
https://www.microsoft.com/zh-cn/p/reattek-audio-control/9p2b8mcsvpln
CAUTION:After installing the hardware,you must install the corresponding driver to play the strong performance of the motherboard.

5-8 BlOS Setting

This chapter introduces how to change the system settings through BloS settings.Please refer to this chapter for details.

The chapter contains the following:
☐ OC(OverClock Settings)
☐ Advanced(Advanced BlOS Features)
☐ BIOS SETTING(Upgrade BloS Settings)
☐ LANGUAGE(Language Settings)
☐ Exit(Exit Settings)

Enter BlOS Main Menu BIOS(Basic Input and Output System)records hardware parameters of the system in the CMOS on the motherboard. Its major functions include conducting the Power-On Self-Test(POST) during system startup,saving system parameters and loading operating system,etc.When computer startup,and then enter the boot self test(POST)program,if there are any errors will be shown the following information:If the boot self test(POST)program information is disappeared before you respond,you can turn it off and then turn on,or press the Reset button on the chassis to restart your computer,can also press <Ctrt>+<Alt>+<Delete>to restart the computer.

Since the Bios version of the motherboard is constantly upgrading,the BlOS description is only for reference.

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